

I/WE CLAIM

1. An optical short-circuit insert, being receivable in a plug housing and comprising:
a plug region; and

5 an optical fiber portion having two mutually parallel optical fiber ends positioned within the plug region, the optical fiber portion has a curved portion being formed in an arc of substantially 180 degrees and is formed of a multi-component glass core with cladding or a multi-core glass fiber with cladding enveloped in a plastic carrier.

10 2. The optical short-circuit insert according to claim 1, wherein the plastic carrier completely envelops the optical fiber except for the optical end surfaces and has one or more shoulders for primary securing and secondary securing of the short-circuit insert in a plug housing.

15 3. The optical short-circuit insert according to claim 1 wherein the mutually parallel, straight portions of the optical fiber portion have a center distance of less than 10 mm.

4. The optical short-circuit insert according to claim 1 wherein the mutually parallel, straight portions of the optical fiber portion have a center distance of about 6 mm.

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5. The optical short-circuit insert according to claim 1 wherein the optical fiber portion comprises a multi-component glass having a thickness of about 1 mm.

6. The optical short-circuit insert according to claim 1 wherein the optical fiber portion
5 comprises a multi-conductor glass fiber having a thickness of about 1 mm.

7. The optical short-circuit insert according to claim 1 wherein the optical fiber portion comprises a multi-core glass fiber with cladding on each core.

10 8. The optical short-circuit insert according to claim 1 wherein the refractive index of the cladding is about 1.6 and the refractive index of the core is about 1.5.

9. The optical short-circuit insert according to claim 1 wherein the core has a diameter of between about 30 and 70 μm and the cladding has a thickness of about 3 μm .

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10. The optical short-circuit insert according to claim 1 wherein the core has a diameter of about 50 μm and the cladding has a thickness of about 3 μm .

11. An optical short-circuit plug assembly comprising:

20 a plug housing enveloping a plug;

a short-circuit insert received in the plug housing, the short-circuit insert being configured for accommodation in the plug housing, the short-circuit insert having a plug region with two mutually parallel optical fiber ends of an optical fiber portion in which the optical fiber portion has a curved portion guided in an arc of substantially 180 degrees and comprises a multi-
5 component glass core with cladding or a multi-core glass fiber with cladding enveloped in a plastic carrier.

12. The optical short-circuit plug assembly according to claim 11, wherein the short circuit insert has a primary securing mechanism for securing the short-circuit insert in the plug housing.

10 13. The optical short-circuit plug assembly according to claim 11 wherein the short-circuit insert has secondary securing mechanism for securing the short-circuit insert in the plug housing.

14. The optical short-circuit plug assembly according to claim 11 wherein the plug housing has latching means for securing the optical short-circuit plug with a complementary plug
15 connector.

15. The optical short-circuit plug assembly according to any one of claim 11 wherein the plug housing is a socket connector.

20 16. The optical short-circuit plug assembly according to claim 11, wherein the plug housing is capable of being brought into a socket connector.